

**REMARKS**

Claims 1-23 were pending in this application.

Claims 4-23 have been withdrawn.

Claim 1 has been rejected.

Claims 2 and 3 have been objected to.

Claims 1-3 have been amended as shown above.

Claims 1-23 remain pending in this application.

Reconsideration and full allowance of Claims 1-23 are respectfully requested.

**I. ALLOWABLE CLAIMS**

The Applicants thank the Examiner for the indication that Claims 2 and 3 would be allowable if rewritten in independent form. Because the Applicants believe that the remaining claims in this application are allowable, the Applicants have not rewritten Claims 2 and 3 in independent form.

**II. AMENDMENTS TO DRAWINGS**

The Applicants propose to amend Figure 15 to add reference numerals 160, 91, and 82. Reference numeral 160 is used in the originally filed application at page 25, line 32. Reference numerals 91 and 82 are used repeatedly in the originally filed application, such as in Figures 13 and 14 in association with elements 80 and 142.

The Applicants also propose to amend Figure 15 to add the labels “ERR” and “Clk” and

to add a frequency divider (“÷N”). The use of the frequency divider is recited in the originally filed application at page 26, lines 6-9. The labels “ERR” and “Clk” are used in the originally filed application at page 26, lines 6-12.

Based on this, the Applicants respectfully submit that no new matter has been added. The Applicants respectfully request acceptance and entry of these amendments to the drawings.

### III. REJECTION UNDER 35 U.S.C. § 102

The Office Action rejects Claim 1 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,939,917 to Debaty (“*Debaty*”) or U.S. Patent No. 5,983,082 to Hilbert (“*Hilbert*”). The Office Action rejects Claim 1 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,452,434 to Arimura et al. (“*Arimura*”). The Applicants respectfully traverse these rejections.

A prior art reference anticipates a claimed invention under 35 U.S.C. § 102 only if every element of the claimed invention is identically shown in that single reference, arranged as they are in the claims. (*MPEP* § 2131; *In re Bond*, 910 F.2d 831, 832, 15 U.S.P.Q.2d 1566, 1567 (Fed. Cir. 1990)). Anticipation is only shown where each and every limitation of the claimed invention is found in a single prior art reference. (*MPEP* § 2131; *In re Donohue*, 766 F.2d 531, 534, 226 U.S.P.Q. 619, 621 (Fed. Cir. 1985)).

Claim 1 recites a “[v]ariable phase-shifting circuit” that includes a “synchronized oscillator.” The Office Action does not establish that any of the cited references anticipates a phase-shifting circuit that includes an oscillator. Instead, all three references use differential

structures in phase shifters. The Office Action does not establish that the differential structures in these references anticipate a “synchronized oscillator” as recited in Claim 1.

*Debaty* recites the use of a phase shifter in an oscillator. For example, Figure 1 of *Debaty* illustrates an oscillator, and Figure 2 of *Debaty* illustrates a phase shifter 10 used in the oscillator of Figure 1. (*Col. 1, Lines 12-39*). Similarly, Figures 3 and 5 of *Debaty* illustrate a phase shifter, and Figure 7 illustrates an oscillator that includes the phase shifter. (*Col. 3, Lines 25-35; Col. 6, Lines 26-32*). In other words, *Debaty* recites the use of phase shifters in oscillators. The Office Action does not establish that *Debaty* recites the use of oscillators in phase shifters.

The Office Action asserts that elements Q1-Q4, C2, and R2 in Figure 5 of *Debaty* anticipate a “synchronized oscillator” as recited in Claim 1. However, the Office Action does not explain how elements Q1-Q4, C2, and R2 of *Debaty* form an oscillator. Moreover, *Debaty* recites that elements Q1-Q4 represent “differential stages” in the phase shifter. (*Col. 3, Lines 40-44*). The Office Action does not explain how these differential stages operate as an oscillator.

The Patent Office cannot merely identify various elements in *Debaty* and assert that those elements represent an oscillator. The burden is on the Patent Office to establish that the various elements cited in *Debaty* actually function as an oscillator. The Patent Office has not met that burden. In particular, the Office Action has not established that elements Q1-Q4, C2, and R2 in Figure 5 of *Debaty* operate as a “synchronized oscillator” as recited in Claim 1.

For these reasons, the Office Action has not shown that *Debaty* anticipates the Applicants’ invention as recited in Claim 1.

*Hilbert* recites the use of a phase shifter in a quadrature signal generator. For example,

Figure 3 of *Hilbert* illustrates a transceiver 300, Figure 4 illustrates quadrature signal generators 320 and 370 used in the transceiver 300, and Figure 8 illustrates a variable phase shift network 420 used in the quadrature signal generators 320 and 370. (*Col. 5, Lines 21-39; Figures 3, 4, and 8*). The transceiver 300 also includes an oscillator 322. (*Col. 6, Lines 28-41*).

*Hilbert* lacks any mention of using an oscillator in the variable phase shift network 420. While *Hilbert* does recite the use of oscillators (such as oscillator 322), these oscillators are not used in the variable phase shift network 420 of *Hilbert*. In fact, these oscillators are not even used in the quadrature signal generators 320 and 370 of *Hilbert* (where the variable phase shift network 420 is used).

The Office Action asserts that elements Q1-Q4, C, and R<sub>s</sub> of *Hilbert* anticipate a “synchronized oscillator” as recited in Claim 1. Once again, the Office Action does not establish that elements Q1-Q4, C, and R<sub>s</sub> of *Hilbert* act as an oscillator. Rather, *Hilbert* simply illustrates how elements Q1 and Q3 receive one differential input signal and elements Q2 and Q4 receive another differential input signal. The Office Action does not explain how these differential structures operate as an oscillator. As a result, the Office Action has not established that elements Q1-Q4, C, and R<sub>s</sub> in Figure 8 of *Hilbert* operate as a “synchronized oscillator” as recited in Claim 1.

For these reasons, the Office Action has not shown that *Hilbert* anticipates the Applicants’ invention as recited in Claim 1.

*Arimura* recites the use of differential amplifiers in a phase shifter. In particular, Figure 5 of *Arimura* illustrates a phase shifter circuit 30 that includes differential amplifiers 32-35. (*Col.*

4, Lines 17-24). *Arimura* lacks any mention of using an oscillator in the phase shifter circuit 30.

The Office Action relies on elements Q1, Q2, Q5, Q6, R3, and R4 of *Arimura* as anticipating a “synchronized oscillator” as recited in Claim 1. However, *Arimura* clearly shows that these elements form part of the differential amplifiers 32 and 34. The differential amplifiers 32 and 34 in *Arimura* are not oscillators. As a result, the Office Action has not established that elements Q1, Q2, Q5, Q6, R3, and R4 in Figure 5 of *Arimura* operate as a “synchronized oscillator” as recited in Claim 1.

For these reasons, the Office Action has not shown that *Arimura* anticipates the Applicants’ invention as recited in Claim 1.

Accordingly, the Applicants respectfully request withdrawal of the § 102 rejections and full allowance of Claim 1.

#### IV. CONCLUSION

The Applicants respectfully assert that all pending claims in this application are in condition for allowance and respectfully request full allowance of the claims.

**SUMMARY**


If any outstanding issues remain, or if the Examiner has any further suggestions for expediting allowance of this application, the Applicants respectfully invite the Examiner to contact the undersigned at the telephone number indicated below or at *wmunck@davismunck.com*.

The Applicants have included the appropriate fee to cover the cost of a one (1) month extension of time. The Commissioner is hereby authorized to charge any additional fees connected with this communication (including any additional extension of time fees) or credit any overpayment to Deposit Account No. 50-0208.

Respectfully submitted,

DAVIS MUNCK, P.C.

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**IN THE DRAWINGS**

The Applicants propose to amend Figure 15 as shown in red ink in the attached sheet. The proposed amendments add reference numerals 160, 91, and 82. The proposed amendments also add labels “ERR” and “Clk” and add a frequency divider (“÷N”).